ABSTRACT:

The present invention provides a method and device of multi-resolution vector quantization (VQ) for audio encoding and decoding used to analyze the audio signal in

5   multi-resolution and quantize the vectors of them. Said method for encoding audio comprises the steps of: adaptively filtering a input audio signal so as to gain a time-frequency filter coefficient and output a filtered signal; dividing vectors of the filtered signal in a time-frequency plane so as to gain a vector combination; selecting the vector to be quantized; quantizing the selected vectors and calculating a

10   quantization residual error; and transmitting a quantized coding task information as a side-information of an encoder to an audio decoder to quantize and encode the quantization residual error. The invention can adaptively filter the audio signal, and adjust the resolutions of time and frequency. The hereinafter result of multi-resolution time-frequency analysis can be utilized effectively through reorganizing the filter

15   coefficient by selecting different organizing policies. VQ may improve encoding efficiency as well as control quantizing precision simply and optimize it.